Basic Principles:

- Data management and reporting are critical components of a successful I&M program; they are the bridge between science and management.
- To be effective, information needs to be provided to decision-makers in a timely manner in a format they can use.
- Natural Resource information needs to be shared among programs and integrated with other park operations including interpretation, maintenance, law enforcement.
- Data need to be available to others: e.g., cooperators for sophisticated analysis, synthesis and modeling; secure, read-only public versions.

NPS Natural Resource Challenge

The NPS, for the first time, is developing a data management capability at the park, regional and national levels that will allow parks to make better use of existing data as well as making new data available to managers, researchers, the public and others.

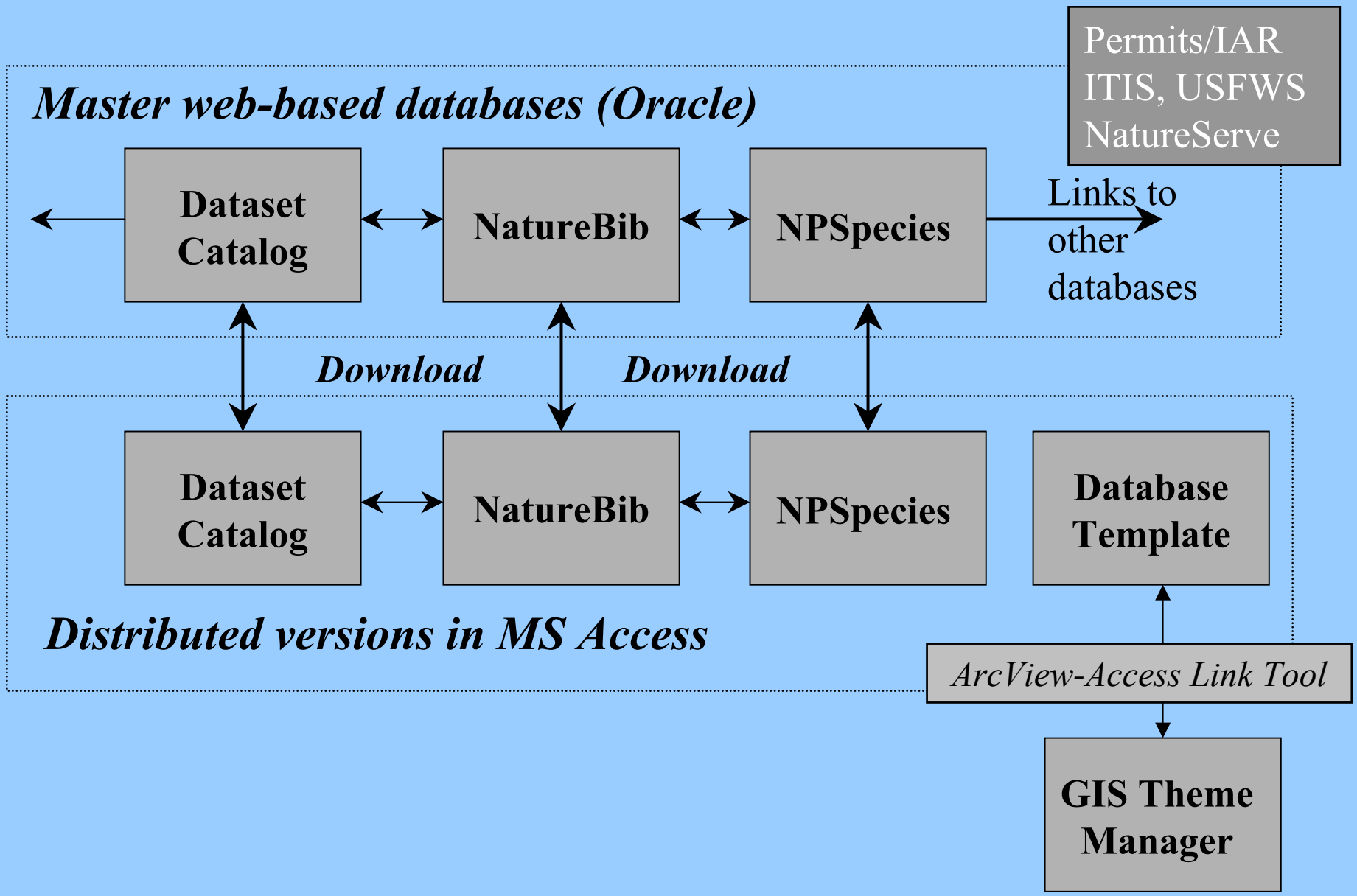
Data are a Valuable Resource

Without good data management planning and practices:

- Information is lost
- Data do not survive turnovers of personnel
- We waste money
- We reinvent the wheel
- Information is not available for decision-making
- Information is not available to cooperators and the public to help build constituencies

If more people use the data, there is likely to be more support to sustain or build the program.

Integrated Natural Resource Data Management Framework



The National Park Service

Inventory & Monitoring

Inventory and Monitoring Applications and Databases

- GIS Theme Manager
- Natural Resource Database Template
- NPSpecies
- NatureBib - Bibliography
- Dataset Catalog
- Synthesis
- Product Specifications

Web-based Clearinghouse of Protocols and Database Components

Amphibian Call Counts	Protocol	Database*	Data Analysis
Bird VCP counts	Protocol	Database	Data Analysis
Breeding Bird Survey	Protocol	Database	Data Analysis
Coral reef video sampling	Protocol	Database	Data Analysis
Rare plants	Protocol	Database	Data Analysis
Rare plants	Protocol	Database	Data Analysis
Weather	Protocol	Database	Data Analysis
Weather	Protocol	Database	Data Analysis
Weather	Protocol	Database	Data Analysis

* Database is an MS Access .mdb file with tables, queries, forms, reports designed for a particular protocol.

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Inventory and Monitoring

PROTOCOL DATABASE

PROTOCOL NAME	PARK	STATUS	SUMMARY	PROTOCOL	MS ACCESS	ANALYSIS
Air Quality	DENA	Completed	Summary			
Amphibians	CACO	R&D Phase	Summary			
Amphibians	NOCA	R&D Phase	Summary			
Bald Eagles	NOCA	Completed	Summary			
Bats	ORPI	Completed	Summary	Protocol		
Black Bear	GRSM	Completed	Summary			
Black-tailed Prairie Dog	PRCL	Completed	Summary	Protocol		
Coral Colonies	VIIS	R&D Phase	Summary			
Coral Reefs	VIIS	Completed	Summary			
Data Management	DENA	R&D Phase	Summary			
Down Woody Debris and Fuels - FIA	MANY	Completed	Summary	Protocol		

Vegetation - Dune Grassland	CACO	R&D Phase	Summary			
Vegetation - Dune Slack Wetland	CACO	R&D Phase	Summary			
Vegetation - Forest Crown Measurements - FIA	MANY	Completed	Summary	Protocol		
Vegetation - Heathland	CACO	R&D Phase	Summary			
Vegetation - Immediate Postburn Effects (Fire Monitoring)	MANY	Completed	Summary	Protocol		
Vegetation - Kettle Ponds	CACO	R&D Phase	Summary			
Vegetation - Overstory Trees (Fire Monitoring)	MANY	Completed	Summary	Protocol		
Vegetation - Plant Communities	PRCL	Completed	Summary			
Vegetation - Salt Marsh	CACO	Completed	Summary	Protocol		
Vegetation - Sapling/Pole-size Trees (Fire Monitoring)	MANY	Completed	Summary	Protocol		
Vegetation - Seedling Trees (Fire Monitoring)	MANY	Completed	Summary	Protocol		
Vegetation - Shrub and Herbaceous Layer (Fire Monitoring)	MANY	Completed	Summary	Protocol		
Vegetation - Terrestrial	DENA	Completed	Summary	Protocol		
Vegetation - Terrestrial	CHIS	Completed	Summary	Protocol		
Vegetation - Terrestrial	MANY	Completed	Summary	Protocol		
Vegetation - Upland Forest	CACO	R&D Phase	Summary			

The National Park Service

Inventory & Monitoring

Black-tailed Prairie Dog

REFERENCE

Plumb, G.E., G.D. Willson, K. Kalin, K. Shinn, and W.M. Rizzo. 2001. Black-tailed prairie dog monitoring protocol for seven prairie parks. U.S. Geological Survey, Northern Prairie Wildlife Research Center, Missouri Field Station, Columbia, MO. 27 p.

DESCRIPTION

Protocol designed to (1) provide relatively simple and cost-effective procedure for estimating density and total size of black-tailed prairie dog colonies, (2) delineate and map edges of colonies, (3) provide low-level surveillance of sylvatic plague. The maximum numbers of individuals that are observed during three consecutive mornings of colony surveillance each year are used to calculate population sizes and densities. Extent of both the clip line and active burrow line are mapped annually using GPS.

USGS
science for a changing world

Black-tailed Prairie Dog Monitoring Protocol for Seven Prairie Parks

Northern Prairie Wildlife Research Center Inventory and Monitoring Protocol

Black-tailed Prairie Dog Monitoring Protocol for Seven Prairie Parks

by

Glenn B. Plumb[1]
Gary D. Willson[2]
Kevin Kalin[3]
Kevin Shinn[3]
William M. Rizzo[2]

[1]Yellowstone National Park
National Park Service
Box 168
Yellowstone, WY 82190

[2]U.S. Geological Survey
Northern Prairie Wildlife Research Center
Missouri Project Office
302 Gentry Hall
University of Missouri-Columbia
Columbia, Missouri 65211

[3]Badlands National Park

Natural Resource Database Template

- Core structure for a flexible, modular, relational database in MS Access for storing inventory and monitoring data (raw data).
- Can be used as a standalone database or in conjunction with the GIS Theme Manager to enter, store, retrieve, and manage data.

Sampling occurs at some place and time

Locations Table
LocationID
x, y coordinates
elevation

Events Table
EventID
Date, time
Protocol version #

1 ∞ 1 ∞

Data specific to a particular protocol
(one or more tables)

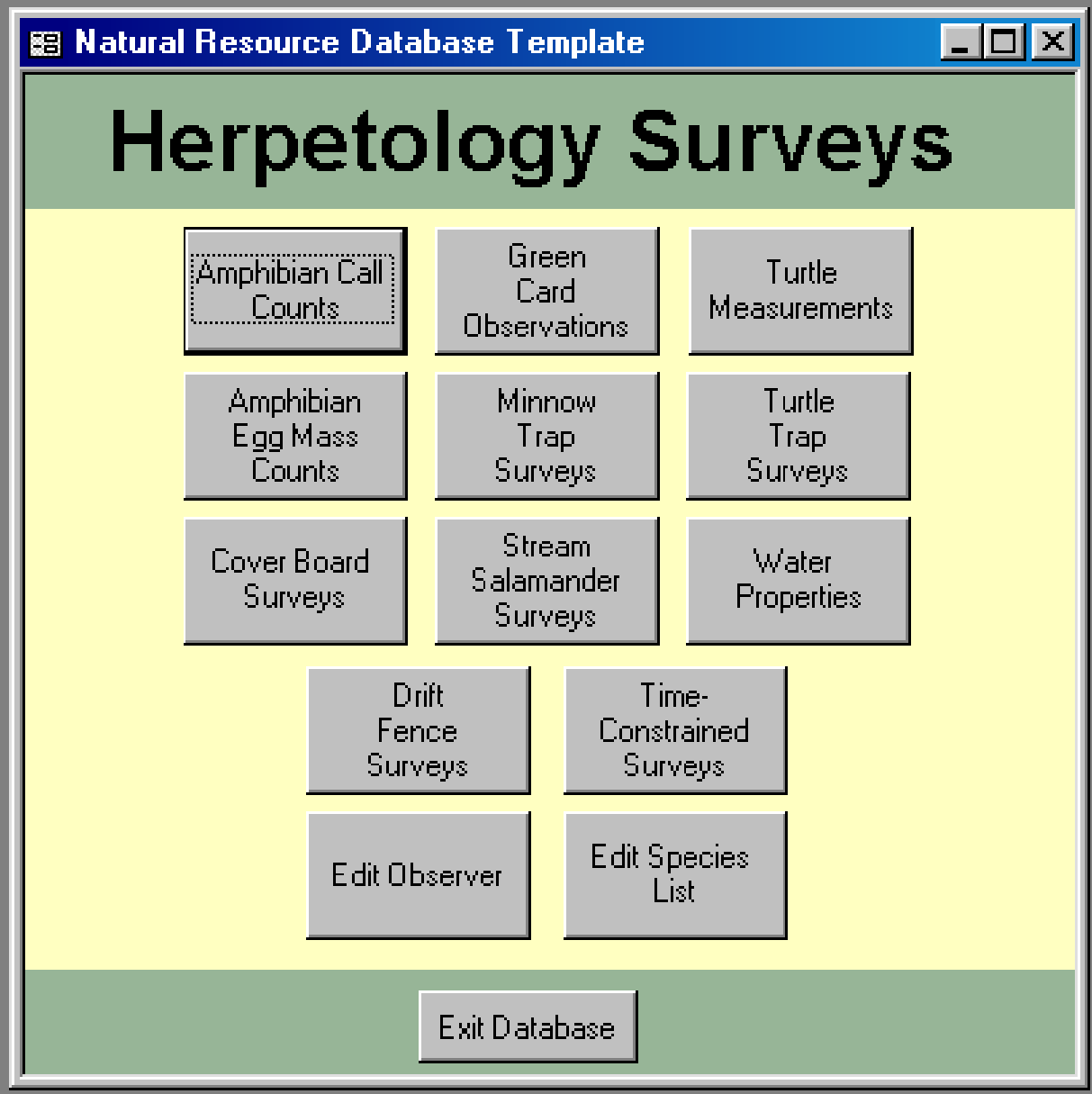
Birds: species, sex, age
Veg Plots: % cover, plant height

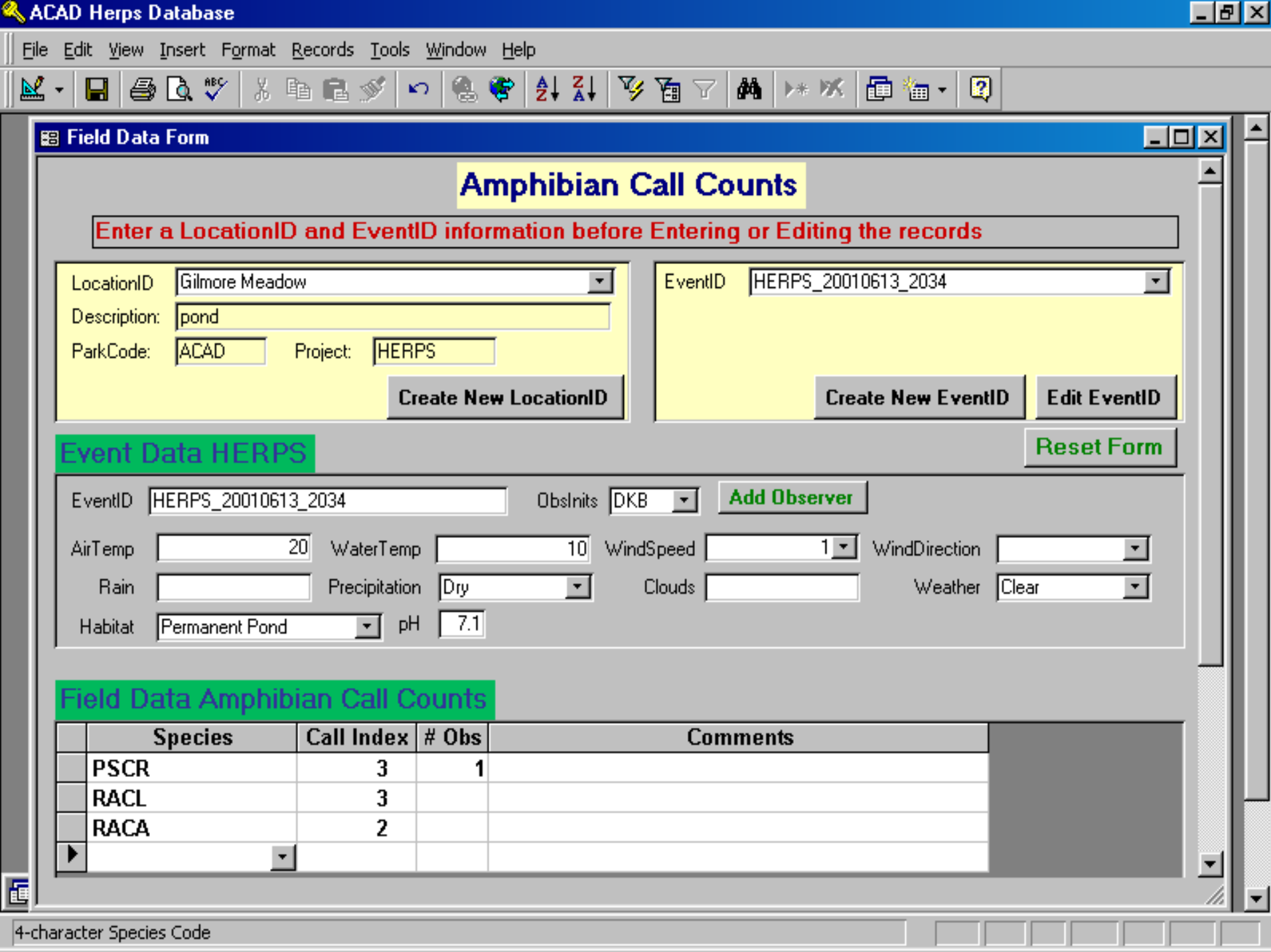
Natural Resource Database Template

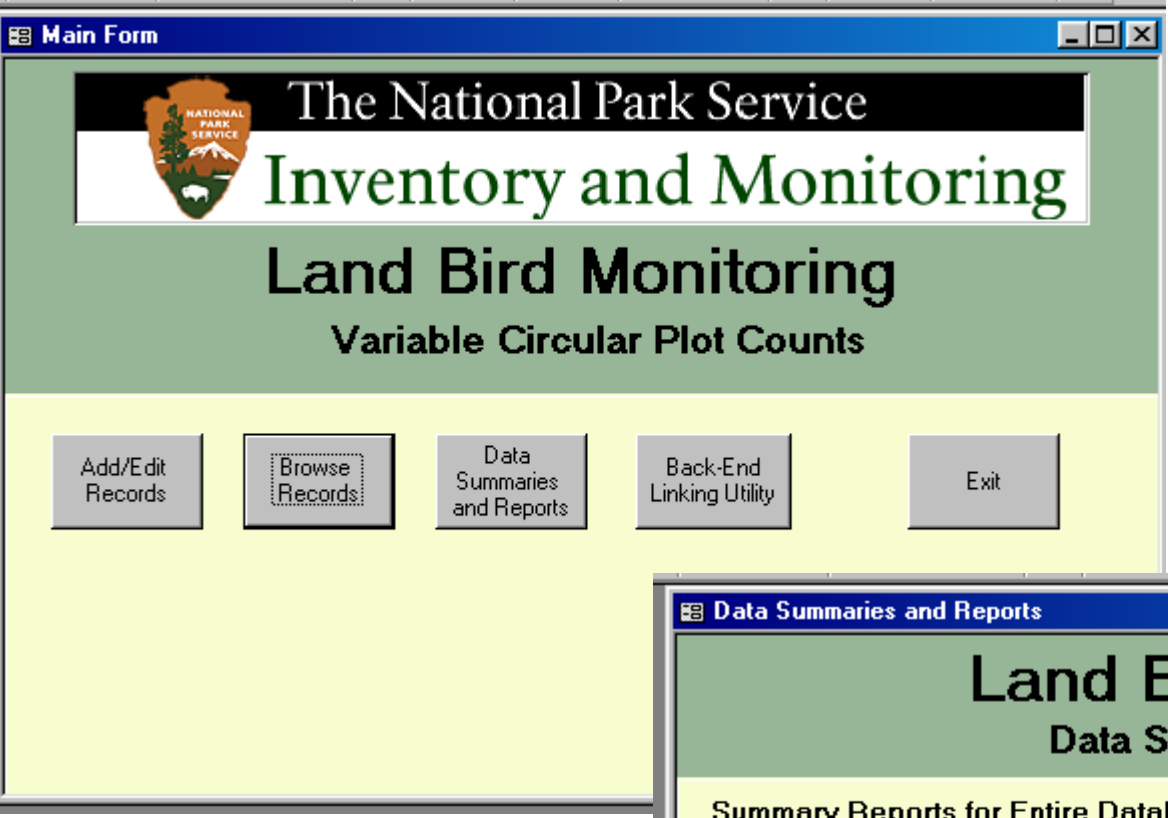
- Separate tables for Location and Event information allow queries by location and time across programs/disciplines, and makes it possible to link with GIS. Standardized Location data will promote integration.
- Servicewide I&M Program staff coordinates effort by developing recommended standards, examples, documentation, training and technical support.
- No plans for future web version or national roll-ups of raw data.

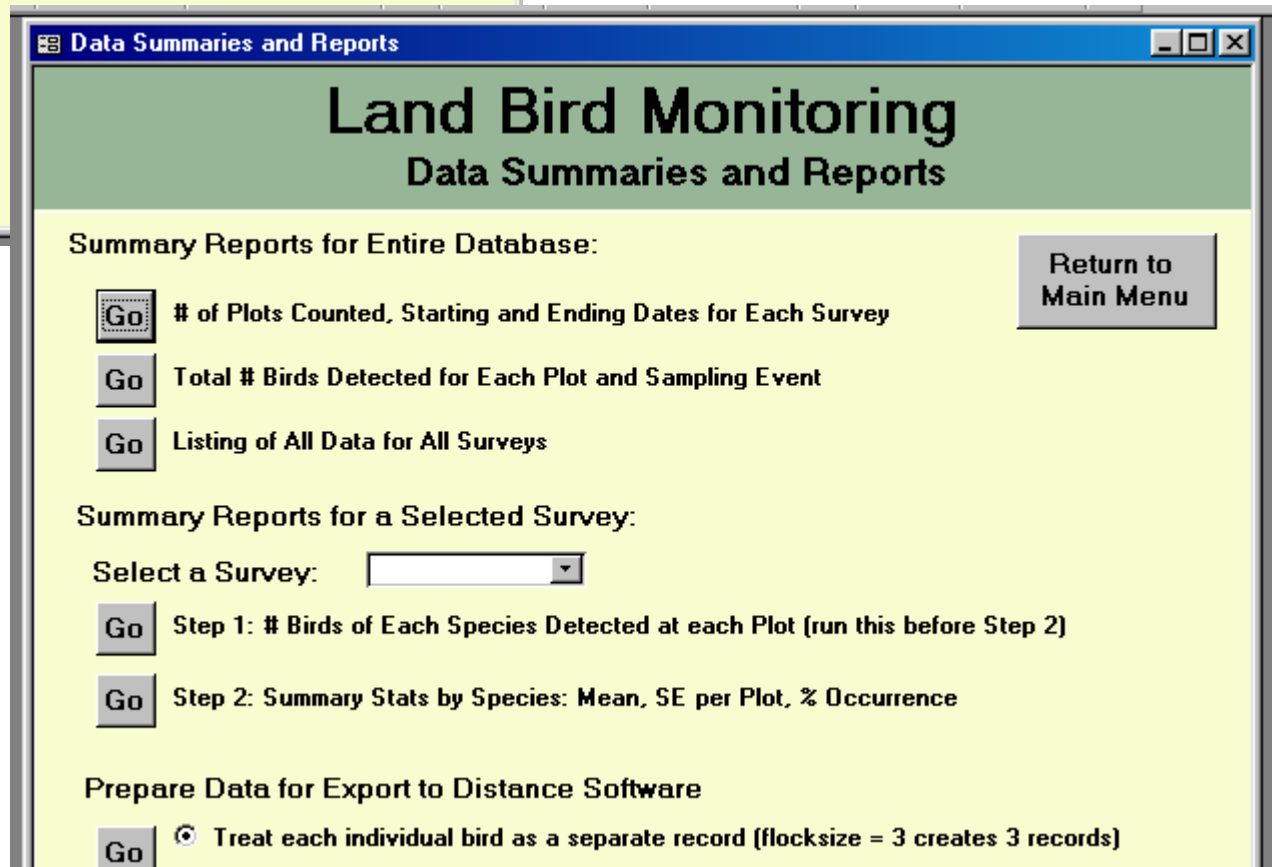
Natural Resource Database Template Expected Benefits

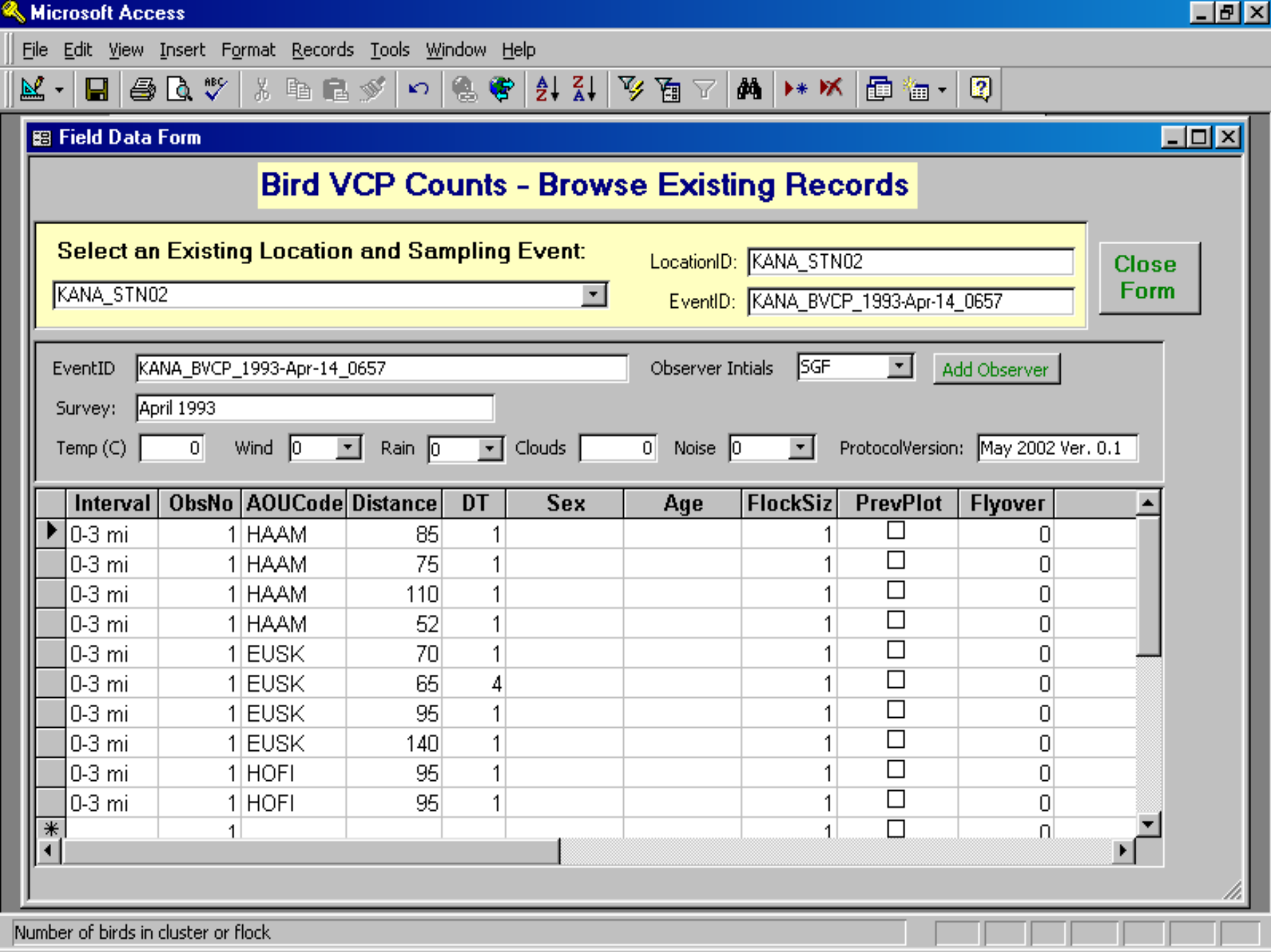
- Improve the quality/utility of NPS databases.
- Promote collaboration and sharing of good ideas and database components.
- Promotes Integration (fire, water quality, plant data).
- Data more readily available to cooperators for data synthesis, modeling, sophisticated analyses.
- Easier to train and support data managers.


Natural Resource Database Template
Herpetology Surveys
Amphibian Call Counts
Green Card Observations
Turtle Measurements
Amphibian Egg Mass Counts
Minnow Trap Surveys
Turtle Trap Surveys
Cover Board Surveys
Stream Salamander Surveys
Water Properties
Drift Fence Surveys
Time-Constrained Surveys
Edit Observer
Edit Species List
Exit Database


ACAD Herps Database
File Edit View Insert Format Records Tools Window Help
Field Data Form
Amphibian Call Counts
Enter a LocationID and EventID information before Entering or Editing the records
LocationID Gilmore Meadow
Description: pond
ParkCode: ACAD
Project: HERPS
Create New LocationID
EventID HERPS_20010613_2034
Create New EventID
Edit EventID
Reset Form
Event Data HERPS
EventID HERPS_20010613_2034
ObsInits DKB
Add Observer
AirTemp 20
WaterTemp 10
WindSpeed 1
WindDirection
Rain
Precipitation Dry
Clouds
Weather Clear
Habitat Permanent Pond
pH 7.1
Field Data Amphibian Call Counts
Species
Call Index
Obs
Comments
PSCR 3 1
RACL 3
RACA 2
4-character Species Code


Main Form
The National Park Service
Inventory and Monitoring
Land Bird Monitoring
Variable Circular Plot Counts
Add/Edit Records
Browse Records
Data Summaries and Reports
Back-End Linking Utility
Exit


Data Summaries and Reports
Land Bird Monitoring
Data Summaries and Reports
Summary Reports for Entire Database:
Return to Main Menu
Go
# of Plots Counted, Starting and Ending Dates for Each Survey
Go
Total # Birds Detected for Each Plot and Sampling Event
Go
Listing of All Data for All Surveys
Summary Reports for a Selected Survey:
Select a Survey:
Go
Step 1: # Birds of Each Species Detected at each Plot (run this before Step 2)
Go
Step 2: Summary Stats by Species: Mean, SE per Plot, % Occurrence
Prepare Data for Export to Distance Software
Go
Treat each individual bird as a separate record (flocksize = 3 creates 3 records)


Microsoft Access
File Edit View Insert Format Records Tools Window Help
Field Data Form
Bird VCP Counts - Browse Existing Records
Select an Existing Location and Sampling Event:
KANA_STN02
LocationID: KANA_STN02
EventID: KANA_BVCP_1993-Apr-14_0657
Close Form
EventID KANA_BVCP_1993-Apr-14_0657
Observer Intials SGF
Add Observer
Survey: April 1993
Temp (C) 0
Wind 0
Rain 0
Clouds 0
Noise 0
ProtocolVersion: May 2002 Ver. 0.1
Interval ObsNo AOUCode Distance DT Sex Age FlockSiz PrevPlot Flyover
0-3 mi 1 HAAM 85 1 1 0
0-3 mi 1 HAAM 75 1 1 0
0-3 mi 1 HAAM 110 1 1 0
0-3 mi 1 HAAM 52 1 1 0
0-3 mi 1 EUSK 70 1 1 0
0-3 mi 1 EUSK 65 4 1 0
0-3 mi 1 EUSK 95 1 1 0
0-3 mi 1 EUSK 140 1 1 0
0-3 mi 1 HOFI 95 1 1 0
0-3 mi 1 HOFI 95 1 1 0
Number of birds in cluster or flock

The National Park Service

Natural Resources Information Division
Biological Resources Management Division

APCAM

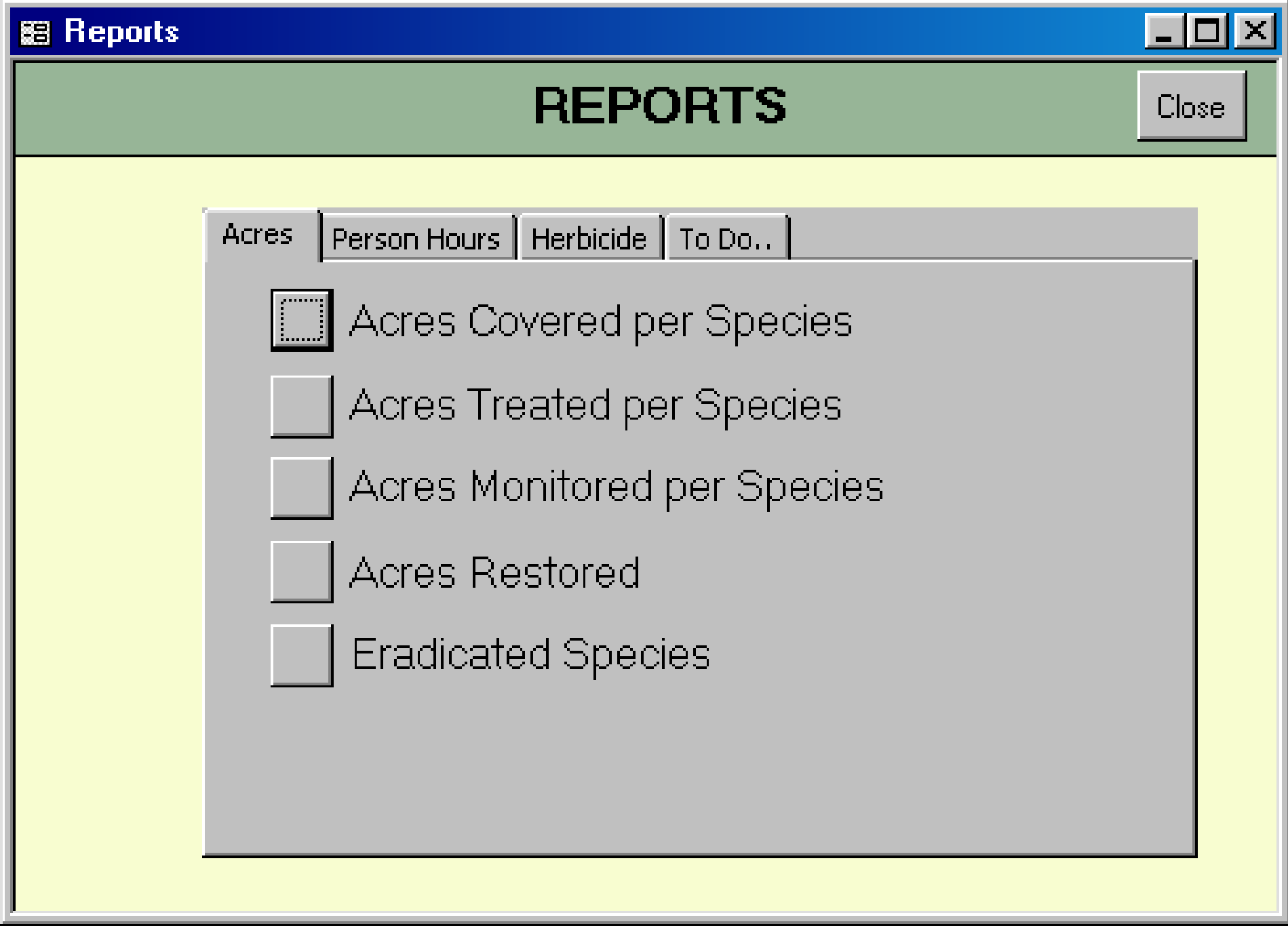
Alien Plant Control and Monitoring

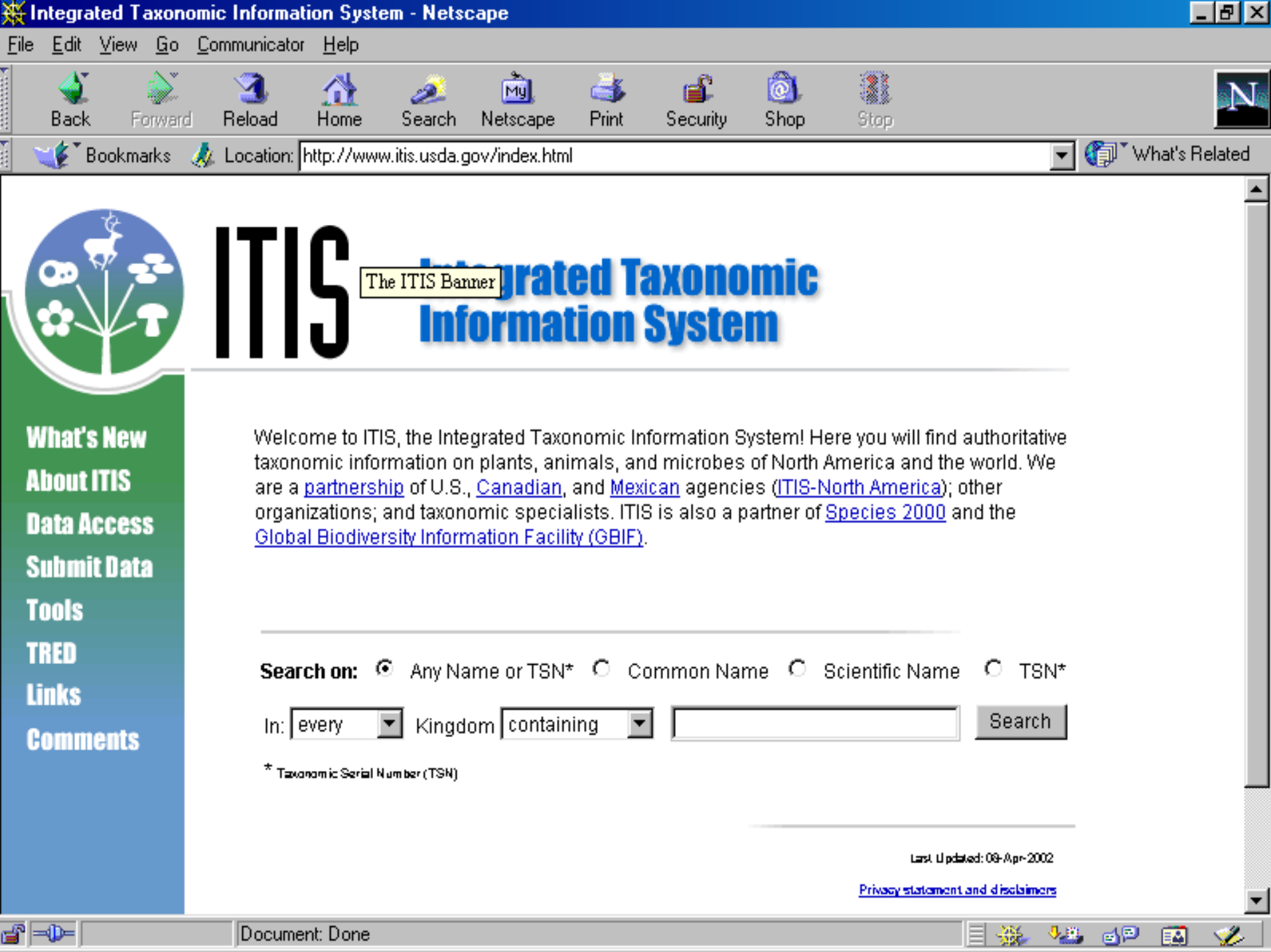
Data Entry

Lookup Tables | Documents

Reports | Utilities | About

Exit


Reports
REPORTS
Close
Acres
Person Hours
Herbicide
To Do..
Acres Covered per Species
Acres Treated per Species
Acres Monitored per Species
Acres Restored
Eradicated Species


Integrated Taxonomic Information System - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Shop Stop
Bookmarks Location: http://www.itis.usda.gov/index.html
What's Related
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In: every Kingdom containing
Search
* Taxonomic Serial Number (TSN)
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